

# Notice of Allowability

Application No.

10/044,300

Examiner

Ashwin Mehta

Applicant(s)

GROTEWOLD, ERICH

Art Unit

1638

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the papers filed 07 August 2003.
2. ☒ The allowed claim(s) is/are 1,4-16 and 18-23.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

5. ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

- |   |  |
|---|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)   | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                             |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 4 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>conducted 10/30/03</u> |
| 5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>submitted 8/7/03</u> | 6 <input checked="" type="checkbox"/> Examiner's Amendment/Comment                                     |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material                | 8 <input type="checkbox"/> Examiner's Statement of Reasons for Allowance                               |
|   | 9 <input type="checkbox"/> Other   |

***Claim Objections & Rejections***

1. The objections to claims 1, 3, and 12 are withdrawn, in light of the claim amendments.
2. The rejections of claims 1-11 and 16-20 under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, are withdrawn in light of the claim amendments.
3. The rejection of claims 11-15 and 17 under 35 U.S.C. 112, 1<sup>st</sup> paragraph, is withdrawn in light of the claim amendments below.
4. The rejection of claims 1-20 under 35 U.S.C. 103(a) is withdrawn, in light of Applicant's argument, in the paper submitted August 7, 2003, that the cited references do not suggest the use of chemical or stress-inducible promoters in transgenic plants to indicate the existence of changed environmental conditions, by using such promoters to control pigmentation.

***Examiner's Amendment***

5. An examiner's amendment to the claims and abstract appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Diane Dobrea on October 30, 2003.

The application has been amended as follows:

In the claims:

1. (Currently amended) A transgenic grass plant whose color phenotype changes to signal its exposure to a chemical or stress conditions, the transgenic grass plant comprising a transgene comprising:

a) an exogenous anthocyanin regulatory gene; and

b) an inducible promoter for regulating transcription of said anthocyanin regulatory gene, said promoter being operably linked to said anthocyanin regulatory gene,

wherein the promoter is [responsive to contact of the transgenic grass plant with] induced when the transgenic grass plant is exposed to a chemical or stress conditions, and wherein a change in color phenotype of the transgenic grass plant signals response of the transgenic grass plant to a chemical or stress conditions.

In claim 6, line 2, the recitation, “comprises one or more of the promoters” was replaced with --is--.

In claim 11, line 3, the recitation, “a maize C1/R gene,” was deleted.

In claim 12, line 3, the recitation, “a C1/R gene,” was deleted.

In claim 13, line 2, the recitation, “comprises one or more of the promoters” was replaced with --is--.

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15. (Currently amended) The nucleic acid construct of claim 12, further comprising one or more of the sequences [marker gene sequences] selected from the group consisting of a marker gene sequence, a selectable gene sequence and a T-DNA sequence.

16. (Currently amended) A method for making a transgenic grass plant which exhibits a color change in response to its exposure to a chemical or stress conditions, comprising:

a) introducing a nucleic acid construct into a plant cell or protoplast, said construct comprising

i.) an exogenous anthocyanin regulatory gene; and

ii.) an inducible promoter for regulating transcription of said anthocyanin regulatory gene, said promoter being operably linked to said anthocyanin regulatory gene,

b) regenerating a transgenic grass plant[s] from said plant cell or protoplast containing said nucleic acid construct, and

c) exposing the transgenic grass plant to a chemical or stress condition,

wherein said chemical or stress condition induces said promoter, and causes a change in color of the transgenic grass plant, which signals the response of the transgenic grass plant to [a] said chemical or stress conditions.

Claim 17 was cancelled.

21. (Currently amended) The [nucleic acid construct] method of claim 16, [further comprising] wherein the nucleic acid construct further comprises a sequence selected from the group

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consisting of a leader sequence, intron sequence, transcription terminator, polyadenylation site, and combinations thereof.

22. (Currently amended) The [nucleic acid construct] method of claim 16, [further comprising] wherein the nucleic acid construct further comprises a marker gene sequence, a selectable gene sequence, T-DNA sequence, or combinations thereof.

23. (Currently amended) The [nucleic acid construct] method of claim 16, wherein said anthocyanin regulatory gene is selected from the group consisting of an R gene, a combination of a C1 gene and an R gene, [a maize C1/R gene,] and a DNA construct encoding a chimeric CRC protein.

In the abstract:

6. On page 19 (the abstract), lines 9-13, the following text was deleted: "Transgenic grass plants which constitutively exhibits a different color phenotype, particularly a red color phenotype, are also provided. The genome the transgenic grass plant comprises a transgene comprising an exogenous anthocyanin regulatory gene operably linked to a constitutive promoter. Grass plants that constitutively display a colored phenotype are useful for display and decorative purposes."


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7. Claims 1, 4-16, and 18-23 are allowed.

***Contact Information***

Any inquiry concerning this or earlier communications from the examiner should be directed to Ashwin Mehta, whose telephone number is 703-306-4540. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays from 8:00 A.M to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at 703-306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 and 703-872-9306 for regular communications and 703-872-9307 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

October 30, 2003

  
Ashwin D. Mehta, Ph.D.  
Primary Examiner  
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